

WEIGHING, SAMPLING, AND TESTING

Of home-separator cream, though at first sight a simple matter, requires very careful attention if justice is to be done to both factory and supplier. Were all cream delivered to the factories in sweet, fresh condition this would be a simple matter, but, unfortunately, most of the cream received at home-separator factories is two days old. In some cases it is quite impossible to get a representative sample. The first consideration of managers under the new system was, naturally, how to keep up the quality of their butter under the very heavy handicaps which it imposed, and rightly so. As a consequence, certain points have in a measure been neglected, and in the majority of cases the suppliers have been paid for more butter-fat than they delivered, due to a too-liberal reading of the "fat" column. Neglect of these points has given rise to the very general impression among farmers that the supplier who delivers his cream makes the most out of his cows. If this be so, the supplier of rich cream must be losing more in his skim-milk; but the very general experience of home-separator factory-managers, who have done a lot of skim-milk testing for suppliers, is that this is not so. Indeed, the chances are all in favour of better skimming, as the speed is more likely to be maintained when aiming at a rich cream. Similarly, where the cream is thin it is usually the result of driving the separator too slow. Michels says, "Most standard makes of separators will do good work when delivering cream containing 50 per cent. of butter-fat." ("Creamery Buttermaking," Michels, page 61.) If the sampling and testing are not properly done, however, the thin cream will no doubt pay the supplier best, especially if it is sour when delivered. Unless it is thoroughly stirred, the sour milk at the bottom will not be properly mixed with the cream and the sample taken will be too rich. Again, if a pipette is used to measure the sample into the cream-testing bottle the result from thin cream will be about right, but the rich cream may be 2 per cent. too low. Allowing, however, that the samples are weighed into the cream-bottles, by reading the "fat" column to extreme points, as is very often done, it is possible to be 2 per cent. too high with both samples; but 2 per cent. added to a 35 test and 2 per cent. added to a 42 test is not fair to the latter. The most satisfactory cream for both supplier and factory is one containing from 40 to 45 per cent. of butter-fat, and any good separator will do very satisfactory work between these points if reasonable care is taken in running it. A thin cream is a loss to every one concerned, and those factories that pay $\frac{1}{2}$ d. per pound of butter-fat less for cream testing 35 per cent. and under are on the right track.

The first question of freight alone is a big one. A five-horse wagon will bring in a load of about 4,000 lb. of cream, which at an average